

Claim 6 (Amended): - A tubulin ligand according to Claim 3, where the tubulin ligand is a halogenated derivative of an halogenated acetamido benzoyl ethyl acetate, with structure as described in Figure 1a.

Claim 7 (Amended, Deleted): - A tubulin ligand according to Claim 3, a compound that may have therapeutic potential in treating diseases such as fungal infections, viral infections, parasitic infections, gout, restenosis, multiple sclerosis, Parkinson's and Alzheimer's diseases.

Point #4

Color is not required for the pictures a black and white copy is fine.

Point #5

The wording of the first paragraph has been changed in the attached Amendment (Article 2).

Point #6

The applicants strongly disagree with the statement that this work is double patenting, all the research contained in the instant application (09/725,030) is novel and it was performed separately from the Application 09/258732 in 1998. It is undoubtedly an extension of the work in that application but it took on a new direction when tubulin was found to be the target of the compounds (BAABU, BAABE) mentioned in that application (Jiang et al. Cancer Research 58, p2126-2133, 1998). Although tubulin was a target in vitro, a novel mechanism of action was discovered which is not expected based on the known mechanisms of tubulin ligands. Prior to this work tubulin ligands were thought to kill cancer cells by mitotic arrest (M-phase) followed by apoptosis (both "mechanisms caused by a compound"). This work shows that the novel derivative iodo-acetamido benzoyl ethyl acetate (IAABE) which was not designed or made before that time, caused a novel cell arrest mechanism at the G1/S phase transition. The G1/S phase transition is one part of the cell division cycle which initiates DNA replication and is not formerly know to involve tubulin protein.

Point #7

The applicants agree with the examiner that Claim #7 should be deleted.

Point #8

The applicants agree with the examiner that Claim #7 should be deleted.

Point #9a and b

For Claim 3 (see above) the phrase "G1/S-phase arrest mechanism" has been replaced with "G1/S-phase cell cycle arrest mechanism" which more clearly defines where the G1/S phase terminology comes from. It is well known that a compound can cause a mechanism, for example taxol causes mitotic arrest and hence the apoptotic death mechanism of cancer cells treated with this compound. Likewise iodo-acetamido benzoyl ethyl acetate causes the G1/S-phase cell cycle arrest mechanism in cancer cells. The applicants cannot see anything wrong with this statement.

Point #10

Claims 4-6 now contain the phrase "with structure as described in Figure 1a" which shows where the halogens atoms are arranged.

Point #11

Jiang et al. (Anti-Cancer Drug Design, 13, 735, 1998) is moot because this paper describes halo-acetamido-benzoyl-ureas which are not the subject of this application.

What is application 60/079,520 ? This application is not accessible on the USPTO web site where only 2001-2002 is available. Please fax to 303-322-2254 Attn: Ashley, thank you.

Application 09/258,732 described synthesis of parental compounds and their activity as pertains to anti-cancer therapy. As stated above in Point #6, all the research contained in the instant application (09/725,030) is novel and it was performed separately from the work in Application 09/258732 in 1999.

Point #12

The "remaining references" statement is unclear as the examiner states that he has obtained the "all but two references" that remain. Which additional ones is he talking about ?

Point #13

"No claim is allowed" what does this mean ?

Thank you for your time in considering these replies.

Yours sincerely,



Ashley Davis

As representative for all applicants.

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